

IN THE CLAIMS:

1. (Currently Amended) A pressure regulating device for use with a breathing assistance apparatus which conveys inhalatory ~~gases to~~ gas to, and removes exhalatory ~~gases from~~ gas from a patient requiring breathing assistance, comprising:

a container which in use includes a body of liquid, having a substantially constant level in use,

AS a terminal conduit ~~terminal conduit means~~ including proximate and distal ends, said proximate end adapted for connection to a breathing assistance apparatus and in use accepting exhalatory ~~gases therefrom~~ gas therefrom, and said distal end submerged in said body of liquid,

such that in use the mean pressure of said ~~inhalatory gases supplied~~ gas supplied to a patient is adjusted by the level to which said distal end is submerged in said body of water.

2. (Currently Amended) A pressure regulating device as claimed in claim 1, further comprising a ~~connection means~~ connector attached to said container and engaging said terminal conduit ~~conduit means~~, whereby in use said terminal conduit ~~conduit means~~ may be adjusted in axial position in predetermined increments, with respect to said ~~connection means~~ connector.

3. (Currently Amended) A pressure regulating device as claimed in claim 2 wherein said terminal conduit ~~conduit means~~ includes at least one partial groove and said ~~connection means~~ connector includes at least one matching partial resilient ridge or toggle.

4. (Currently Amended) A pressure regulating device as claimed in either of claims 2 or 3 wherein said predetermined increments are one ~~are one half~~ centimetre each.

5. (Currently Amended) A pressure regulating device as claimed in claims 1 or 2 further comprising an overflow outlet adjacent ~~overflow means for regulating the level of said body of liquid with respect to said container to a substantially~~ constant level.

6. (Currently Amended) A pressure regulating device as claimed in claim 5 wherein said overflow outlet ~~overflow means~~ also includes damping means for filtering any perturbations in said level of said body of liquid, such that in use said ~~overflow means~~ regulates the “mean” level of said body of liquid associated with said outlet.

AS 7. (Currently Amended) A pressure regulating device as claimed in claim 6 wherein said damping ~~damping means~~ comprises an underwater outlet from said container which is located at a position which in use is substantially below the level of said body of liquid, and a wave shield ~~means for reducing the pressure waves at said outlet produced in use in said body of liquid by patient's exhalations flowing there through~~ located at a position which in use is between the level of said body of liquid and said underwater outlet.

8. (Currently Amended) A pressure regulating device as claimed in claim 5 ~~in any one of claims 5 to 7~~ wherein said ~~overflow means~~ further includes comprising a removable container, whereby in use the overflow from said body of liquid flows through said overflow outlet into said removable container.

9. (Original) A pressure regulating device as claimed in claim 8 wherein said body of liquid is substantially composed of water.

10. (Original) A pressure regulating device as claimed in claim 9 wherein said device is constructed substantially from clear plastic materials.

11. (Currently Amended) A breathing assistance apparatus for ~~supplying gases~~ supplying gas to a patient to assist said patient's breathing including a gas supply ~~gases supply means~~ adapted to ~~supply gases~~ supply gas to said patient, ~~delivery means~~ an interface including a plurality of ports adapted to deliver said ~~flow of gases to said~~ gas to said patient, an inhalatory conduit ~~inhalatory gases transport means~~ for conveying said ~~flow of gases from~~ gas from said gas supply to said interface ~~delivery means~~, exhalatory ~~conduit~~ gases transport means for conveying said patient exhalations from said interface ~~delivery means~~, and a pressure regulating device disposed within or in fluid communication with said exhalatory gases transport means, wherein said pressure regulating device comprises a pressure regulating device as claimed in any one of claims 1 to 10

a container which in use includes a body of liquid,

a terminal conduit including proximate and distal ends, said proximate end adapted for connection to said exhalatory conduit and in use accepting exhalatory gas therefrom, and said distal end submerged in said body of liquid,

such that in use said patient is delivered a substantially constant mean pressure, said mean pressure adjusted by the level to which said distal end is submerged in said body of water.

12. (Original) A breathing assistance apparatus as claimed in claim 11 further comprising humidification means for humidifying said gases prior to delivery to said patient, disposed within or in fluid communication with said inhalatory gases transport means.

13. (Currently Amended) A pressure regulating device for use with a breathing assistance apparatus which conveys ~~inhalatory gases~~ inhalatory gas to, and removes ~~exhalatory gases~~ exhalatory gas from a patient requiring breathing assistance, comprising:

a container which in use includes a body of liquid having a substantially constant level in use, and

a terminal conduit ~~terminal conduit means~~ including proximate and distal ends, said proximate end adapted for connection to breathing assistance apparatus and accepting ~~exhalatory gases~~ exhalatory gas therefrom, and said distal end submerged in said body of liquid,

such that in use the resultant bubbling occurring in said body of liquid produces relatively small controlled perturbations in the pressure of ~~inhalatory gases supplied gas~~ supplied to a patient.